

**REMARKS**

Claims 1-11 and 3-20 are pending in the application. Claims 3-5, 7-11, 15-17, 19 and 20 have been withdrawn from consideration as being drawn to a non-elected invention. Claims 1, 2, 6, 13-14 and 18 have been examined on the merits. The amendments to the claims have been made to further clarify the presently claimed invention.

No new matter has been introduced, and entry of the above revised claims is respectfully requested.

**Claim Objections**

Claim 1 has been objected to for reciting *E. coli* and should recite *Escherichia coli*. The claim language has been amended to reflect this change. Therefore, this objection is believed to have been overcome.

Claim 2 has been objected to for reciting "SEQ ID NO:3" incorrectly. The sequence listing identifier recitation has been corrected. Therefore, this objection is believed to have been overcome.

Claim 6 has been objected to for reciting "SEQ ID NO:5" incorrectly. The sequence listing identifier recitation has been corrected. Therefore, this objection is believed to have been overcome.

**Rejection Under 35 U.S.C. §112, first paragraph**

Claim 12 has been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested. The Examiner states that claim 12, which is directed to a vaccine, is not enabled by the specification because the specification does not show "inducing protective immunity" of the polypeptide of claim 1. Claim 12 has been canceled by the Applicant, therefore, this rejection has been overcome.

**Rejection Under 35 U.S.C. §112, second paragraph**

Claim 1 has been rejected under 35 U.S.C. §112, second paragraph, for reciting "positions 110 and 112 are mutated in a site-directed manner." Applicant traverses this rejection.

Reconsideration and withdrawal thereof are respectfully requested. Claim 1 has been amended. Accordingly, it is believed that this rejection has been overcome.

**Rejection Under 35 U.S.C. §102(a), as anticipated by Park (Experimental and Molecular Medicine, 31(2):101-107, June 1999)**

Claims 1-2, 6, 12-14, and 18 have been rejected under 35 U.S.C. §102(a) as anticipated by Park. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested. Applicant submits that the inventorship is identical to the authorship of the cited document, which was published less than one year from the priority date of September 15, 1999 (PCT/KR99/00555). Therefore, this reference fails to be applicable to the claimed invention.

**Rejection Under 35 U.S.C. §102(b), as anticipated by EP 0 620 850 B1 (Domenighini), published March 3, 1999**

Claim 1 has been rejected under 35 U.S.C. §102(b) as anticipated by EP 0 620 850 B1. Applicant traverses this rejection. Reconsideration and withdrawal thereof are respectfully requested.

EP '850 reference discloses a heat-labile enterotoxin of *E.coli*, which has mutations at positions 110 and 112. However, EP '850 fails to disclose or suggest a heat-labile enterotoxin protein of *E.coli*, in which the serine residue at position 63 is substituted with tyrosine or the amino acid residues at positions 110 and 112 are deleted. Therefore, EP '850 fails to anticipate the presently claimed invention.

**Conclusion**

It is believed that the application is now in condition for allowance. Applicants request the Examiner to issue a notice of Allowance in due course. The Examiner is encouraged to contact the undersigned to further the prosecution of the present invention.

**Application No.:**  
**10/088,202**

**PATENT**  
**58049-00003**

The Commissioner is hereby authorized to charge JHK Law's Deposit Account No. **502486** for such fees required under 37 CFR §§ 1.16 and 1.17 and to credit any overpayment to said Deposit Account No. **502486**.

Respectfully submitted,

**JHK Law**

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